

**COMMONWEALTH OF VIRGINIA
DEPARTMENT OF ENVIRONMENTAL QUALITY
DIVISION OF WATER QUALITY PROGRAMS**

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SUBJECT: Guidance Memo No. 00-2016, Amendment #1
Chain of Custody Policy and Procedures

TO: Regional Directors



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DATE: March 14, 2006

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Summary:

This guidance memorandum, originally adopted October 13, 2000, has been updated to reflect the agency's current Chain of Custody procedures.

Electronic Copy:

An electronic copy of this guidance in PDF format is available for staff internally on DEQNET, and for the general public on DEQ's website at: <http://www.deq.virginia.gov>.

These electronic copies are in PDF format and may be read online, downloaded, distributed to the staff or the public. The numbering convention is: GM, then a two-digit number designating the year of preparation, followed by a hyphen and the document number.

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Disclaimer:

This document is provided as guidance and, as such, sets forth standard operating procedures for the agency. However, it does not mandate any particular method nor does it prohibit any particular method for the analysis of data, establishment of a wasteload allocation, or establishment of a permit limit. If alternative proposals are made, such proposals should be reviewed and accepted or denied based on their technical adequacy and compliance with appropriate laws and regulations.

POLICY STATEMENT

It shall be the policy of the Department of Environmental Quality (“DEQ”) that all samples will be collected using the following chain of custody procedures to ensure the integrity of samples so they can be used as admissible evidence to enforce the Commonwealth’s environmental laws and regulations.

Samples taken in all cases involving a facility, permit, certificate, order or potential violation of a regulation or law shall follow chain of custody procedures. Samples taken for ambient environmental monitoring do not require chain of custody procedures. Variances to these procedures may be granted for those samples taken for special studies, on a case by case basis, only by the joint written agreement of the appropriate Compliance and Enforcement Managers (“CEM”) and Media Division Director.

The Division of Consolidated Laboratory Services (“DCLS”) shall be used for the analysis of all samples except another laboratory may be used upon prior written approval of the appropriate CEM and media Division Director. The chain of custody procedures used by the alternate laboratory shall be reviewed by the appropriate CEM and Media Division Director to ascertain that it meets DEQ’s chain of custody policy and procedure requirements. Only following each review shall authorization be given to use an alternate laboratory.

Samples taken by DEQ’s VOC Sampling and Analysis Program shall be sent to the City of Philadelphia Department of Public Health Air Management Services Laboratory, Philadelphia, Pennsylvania or DCLS if they are capable of performing the required testing.

I. **PURPOSE AND SCOPE**

The following procedures are to be used by all DEQ employees to ensure accountability for and documentation of sample integrity from the time all samples are collected until receipt by the receiving laboratory. These procedures are intended to document each stage of the sample's life cycle (i.e., collection, transport, and delivery). Only the DEQ Director or his designee can authorize exceptions to this policy.

II. **DEFINITIONS**

- 2.1. **Custody-Physical Possession or Control.** A sample is "under custody" if it is in the possession or under the control of the Sample Custodian so as to prevent tampering or alteration of its characteristics. A sample is under custody if:
 - 2.1.1 It is in your possession or in your view after assuming possession.
 - 2.1.2 It was in your possession and then you locked or sealed the sample in a manner to prevent tampering, or
 - 2.1.3. It is in a secured area. A secured area should have restricted access, locked storage facilities and be locked at all times when not attended (e.g., inside a locked or sealed cooler, or locked storage area).
- 2.2. **Sample.** A portion of an environmental or source matrix that is collected and used to characterize that matrix.
- 2.3. **Sample Custodian.** The person possessing the sample.
- 2.4. **Chain of Custody.** A process whereby a sample is maintained under physical possession or control. Chain of custody procedures are one piece of a large quality assurance program to assure data and conclusions are defensible in a legal or regulatory situation.

- 2.5. **Sample Submission Form.** DEQ or the laboratory provides the forms used to record sample collection information, test(s) requested and result reporting instructions.
- 2.6. **Sample Set.** Collection of samples collected during one sampling event.

III. **SAMPLE COLLECTION**

- 3.1. **Sampling.** Samples are routinely collected by DEQ employees using standard collection procedures defined by media specific Standard Operating Procedures (“SOPs”).
- 3.2. **Custody Assignment.** The sampler shall ensure proper collection, preservation and labeling of the sample. The sampler will also initiate the chain of custody documentation process, prepare sample submission information, and prepare and store samples for transport to the laboratory. Since as few people as possible should handle samples, the sampler is responsible for the initial custody of the sample.
- 3.3. **Consultation.** Information regarding the collection, preservation, transport, testing and sample custody may be obtained around-the-clock, seven days a week, from DCLS even when not using DCLS.
- 3.4. **Sample Kits.** Collection kits with containers, preservatives, and sampling instructions may be provided by DCLS. DCLS is available for consultation purposes if there are questions about sample collection and preservation regardless of the laboratory used.
- 3.5. **Sample Identification.** To ensure samples are traceable, samples shall be clearly labeled immediately upon collection. Labeling information may vary by media SOPs, but labels must be written legibly, using a ballpoint (indelible) pen, unique for the sample/case and firmly fixed to the sample. The sample label shall contain the unique sample number or identification, sample type, name of sampler, preservation method, priority code, and date and time of collection.

- 3.6. **Sample Preservation**. Sample preservation instructions are provided in sample kit collection instructions and in agency SOPs. Sample preservation actions shall be documented in field logs, on chain of custody forms, on lab sheets, and on sample labels.

IV. **SAMPLING DOCUMENTATION**

- 4.1. **Field Logbooks**. In any sampling effort, there are field information and measurements that need to be recorded. This information shall be retained in a sampler's field log. Examples of information entered include: purpose of sampling, producer, type of sample, address, sample composition, description of sampling point, sampling method, date and time of collection, sample identification number, field data, and preservation method. This record may be considered evidence and part of the larger aspect of data defensibility. Logbooks shall be kept in a safe place.
- 4.2. **Chain of Custody Records**. Agency Chain of Custody Records (COCR) shall be used when submitting a sample for analysis. Attachment 1 is the General DEQ Chain of Custody Record and Attachment 2 is the DEQ VOC Chain of Custody Record. Chain of custody forms shall be completed by the sampler at the time of sample collection and shall be submitted with each sample set. The sampler shall print their name, sign, and date the form. The completed form shall be signed by the sampler and dated (chain of custody block) and placed in a waterproof carrier (e.g., zip-lock bag) if it is a water sample. The form shall be packaged with the sample for transport to the laboratory. The original COCR, all results, and documentation are maintained by DCLS in a case file. This original information is released pending litigation. The analytical results are posted in CEDS if so submitted or certificates of analysis are returned to the sampler if CEDS is not used.

- 4.3. **Sample Submittal and Test Request Form**. With each sample submitted to the laboratory for analysis, the sampler shall include the following information:
- 4.3.1. The analytical request
 - 4.3.2. Sample identification
 - 4.3.3. Field data
 - 4.3.4. The Chain of Custody Record
 - 4.3.5. Copies of applicable documents (e.g., MSDS, sample formulations (if applicable)).
 - 4.3.6. Any other information required to meet laboratory testing and reporting requirements
 - 4.3.7. This information may be submitted by:
 - 4.3.7.1. An agency lab sheet that is completed following established agency SOPs and packaged and shipped with the chain of custody form with the sample. Attachment 3 is the general DEQ Water Division Lab sheet for submitting samples to DCLS.
 - 4.3.7.2. An electronic file generated by the agency's Comprehensive Environmental Database System ("CEDS")

Note: All required forms are available for download from DEQnet.

V. SAMPLE PACKAGING, TRANSPORT AND TRANSFER OF CUSTODY

- 5.1. Sample Packaging. The correct preparation and preservation of samples for transport are critical to ensure sample integrity.
- 5.1.1. The sampler should contact the laboratory if unsure of any aspect of sample collection, preservation, packaging, and transport.

- 5.1.2. Samples must be labeled, tightly sealed in the appropriate container, and double bagged in plastic where applicable.
 - 5.1.3. The original COCR and other documentation are to be sealed tightly in a plastic zip-lock bag.
 - 5.1.4. If not immediately delivered to the laboratory by the sampler, containers shall either be locked with a personal padlock, or sealed with a custody seal, or stored in a secure area. When samples are ready for shipment to DCLS, sealed transport containers with custody seals provided by DCLS shall be used. Samples that are ready for shipment to laboratories other than DCLS shall be shipped in tamperproof transport containers.
 - 5.1.5. Samples, Chain of Custody Record, and documentation are then placed in an appropriate transport container (e.g., cardboard mailer, Styrofoam box, paint can, plastic box or cooler) and padded (e.g., bubble wrap, Styrofoam peanuts) as appropriate. A copy of the COCR is attached to the outside of the shipping container.
 - 5.1.6. The sampler is responsible for preservation prior to and during transport. Special shipping measures can be briefly described on the chain of custody record and should be recorded in detail in the field logbook.
- 5.2. Sample Transport. Samples are to be delivered to DCLS or other prior approved laboratory by one of the following means. Regardless of the mode of transport, arrangements for delivery are to be coordinated with the laboratory and the samples delivered as soon as possible.
- 5.2.1. Immediate Delivery by Sample Custodian. Samples are to be delivered to the Sample Records Management section of DCLS or other prior approved laboratory as soon as possible after collection. The sample shall remain in the Sample Custodian's possession or sight at all times.

- 5.2.2. Routine and Special Courier. DCLS couriers shall be used to deliver legal and regulatory samples to DCLS. Samples will be packaged as described in §5.1. DCLS provides special lock boxes and coolers for this purpose. Lock boxes and coolers may be delivered to courier pick-up sites for delivery. The DCLS courier routinely picks samples up in the late afternoon and delivers them to the laboratory the next day. A special pick-up can be arranged for any time of night or day. When received by the laboratory custodian, the package will be inspected to ascertain whether tampering occurred and these actions recorded on the COCR.
- 5.2.3. Common Carriers. Common carrier delivery services (e.g., United Parcel Service, Federal Express) are often the only practical means of delivering samples to laboratories when DCLS cannot provide the required testing and an alternate laboratory must be used. Common carrier delivery services must commit to safeguard all cargo, assuring that it will not be tampered with and will be delivered promptly. Carriers general specify the type of shipping container to be used with accepting the carrier's services.
- 5.2.4. Holding Area. Until the courier or the common carrier picks up the container, the container must be either locked or kept in a locked area.

VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR QUALITY SAMPLE

CHAIN OF CUSTODY RECORD

Operator:		Unit:		Region:									
Address:		Phone:		FAX:									
		Email:		SEAL #:									
Longitude:		Latitude:		Elevation:									
If this is an Emergency (Priority 1) Sample, please provide in print:													
Contact Name:													
Contact Number:													
Station ID or Sampling Location	Sample Type / Sample ID	Date	Time	Routine	Emergency Sp. Study	Analysis Requested	TO-15	TO-11	IO-3A	California Method 39	Microscopic Analysis	Filter Weight	Comments
Relinquished by: (signature)		Received by: (signature)		Date/ Time		Relinquished by: (signature)		Received by: (signature)		Date/ Time			
Relinquished by: (signature)		Received by: (signature)		Date/ Time		Relinquished by: (signature)		Received by: (signature)		Date/ Time			
Relinquished by: (signature)		Date/ Time		Received in Laboratory by: (signature)		Date/ Time		Shipping Seal Received in Place? ____ Seal No. _____ *					

